UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
BRUCKART, BENJAMIN R

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/824,527	JOHNSON, KIRK
	Examiner	Art Unit	
	BENJAMIN R. BRUCKART	2446	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>18 September 2009</u>.
2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-51 and 61-89</u> is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-8, 11-25, 28-51 and 61-81, 84-89</u> is/are rejected.
7) ☒ Claim(s) <u>9,10,26,27,82 and 83</u> is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>31 July 2001</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a) ☐ All b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-51, and 61-83 are pending.

Claims 1, 19, 35, 40, 45, and 47 are independent.

Claims 52-60 remain cancelled.

Claims 1, 19, 35, 37, 40, 45, 47, 49, 73, 82-83 are amended.

The 35 U.S.C. 112, second paragraph rejection is withdrawn in light of the amendment.

Drawings

The drawings are objected to as being sloppy, unclean and illegible hand written

drawings. Appropriate correction is required.

Response to Arguments

Applicant's arguments filed in the amendment filed 9/18/09, have been fully considered

but are moot in view of new grounds of rejection. The reasons set forth below.

Applicant's invention as claimed:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

Claims 1-7, 11-13,15-16, 18-24, 28-30, 32, 33, 35, 36, 38, 39-41, 43-48, 50, 51, 62, 64, 66, 68, 70, 72, 74-76, 78-79, and 84-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub. No. 2001/0039585 by Primak et al in view of U.S. Patent No. 6,006,218 by Breese et al.

Referring to claim 1, Primak discloses a system for optimizing server selection for clients from among a plurality of servers in a packet communication network (Figure 1; abstract), the system comprising:

a plurality of servers for alternatively responding to client requests (Figure 1, reference characters 30a-e);

a central server (DNS server) that maintains server selection weights (i.e. capacity information), and, based on the weights, provides in response to a client request (i.e. *on receipt of a client query)*, a candidate server list (i.e. either all or a subset of DNS agents on the server cluster zones for which the DNS server 10 has received server selection weight information) for responding to a client request to a network node (i.e. the DNS server) adapted to interrogate (i.e. ping as stated by Applicant on page 8 of the disclosure) the individual servers represented in the candidate server list, the central server receiving feedback (i.e. measurement statistics) indicating service by individual servers in response to client requests by the individual servers (i.e. via the DNS agents 32 of each cluster) and modifying the server selection weights based on the feedback (Figure 1; abstract; p. 2, ¶ 25; p. 3, ¶ 31).

Primak furthermore discloses comprising a DNS server 10 which receives the client request from the client (p. 2, ¶ 25); and based on the client requests, forwards the client requests to the central server (since the central server is part of the DNS server, it inherently forwards this request to the server when a resolution is to be made based on the server cluster).

Primak does not specifically teach adding an extra server, independent of the selection weights.

However, in analogous art, the Breese reference teaches adding to the candidate list <u>an extra candidate, independent of a server selection weight maintained for the added extra candidate server</u> (Breese: abstract; col. 2, lines 37-52) in order to provide items that are useful of both new and old (Breese: abstract; col. 2, lines 37-52).

It would have been obvious to one of ordinary in the art at the time of the invention to create the invention of Primak to include updated server lists as taught by Breese in order to provide items that are useful of both new and old (Breese: abstract; col. 2, lines 37-52).

Regarding claim 2, the system according to claim 1 further comprising a DNS server, the NDS server:

receives the client request from the client (p. 2, ¶ 25);

based on the client requests, forwards the client requests to the central server (page 3, para 31)

Referring to claim 3, Primak discloses the invention substantively as described in claim 2. Primak further discloses interrogating candidate servers in the candidate server list (p. 2, ¶ 25).

Referring to claim 4, Primak discloses the invention substantively as described in claim 3. Primak further discloses selecting a candidate server based on the interrogation (p. 3, ¶ 31).

Referring to claim 5, Primak discloses the invention substantively as described in claim 4. Primak further discloses indicating to the selected candidate server that it has been selected to provide service to the requesting client (it is inherent that when the client sends its request to the selected candidate server via a redirection packet, the server will know that it has been selected to provide service to the requesting client, since the only way for the client to be serviced by the particular server in the cluster is to request the address from the DNS server) (p. 3, ¶ 31).

Referring to claim 6, Primak discloses the invention substantively as described in claim 3. Primak further discloses the DNS server returns to the requesting client the address of the first server to respond to the interrogation (Primak uses this term as the "shortest RTT" or Round Trip Time; since all interrogation requests are sent virtually simultaneously, it would be deduced that the server with the lowest RTT would be the first server to respond to the interrogation) (p. 3, ¶ 29).

Claim 7 is rejected for similar reasons as stated above.

Referring to claim 11, Primak discloses each candidate server in the candidate server list is
unique from each other candidate server in the list (i.e. there are no duplicate servers returned to
the client, merely only ones which are above threshold) (Figure 1; p. 2, ¶ 23; p. 3, ¶ 31).

Referring to claim 12, Primak discloses the feedback occurs at a requested event (i.e. when
requested to by the DNS server) (p. 3, ¶ 27-29).

Referring to claim 13, Primak discloses the weights are based on a bias factors to reduce
convergence time, the bias factors including geographical location (Primak discloses returning
the server with the shortest RTT, or round trip time, the server geographically closest to the
client will have the higher RTT, and thereby be biased towards that particular server in the
weighting of the servers) (p. 2, ¶ 29).

Referring to claim 15, Primak discloses the invention substantively as described in claim 1.
Primak does not disclose the central server includes vectors of server selection weights for
subsets of clients. However, it is common knowledge that a DNS server caches certain aspects
of a client's session with a server (i.e. maintains state information and would be able to redirect
to an appropriate server if the client has an affinity towards that particular machine, either
geographical or security). Taken in context with the invention disclosed in Primak, it would
have been obvious to one of ordinary skill in the art to include caching weights of servers for
particular clients for faster redirection and less transactional overhead.

Referring to claim 16, Primak discloses the central server includes multiple central servers
organized as a distributed system (p. 2, ¶ 25).

Referring to claim 18, Primak- Breese discloses the candidates represented in the candidate
server list are pseudo-randomly selected based on the weights (they are based on feedback
received from the servers, which factor upon the current loads of the servers, thereby providing a

randomness to the selection factor, there is no actual scheme, such as round-robin, to select the
next server, thereby it is considered a pseudo-random selection) (Primark: e.g. abstract;
Leighton: "random priority list of desired servers", see rejections above).

Claims 19-24, 28-30, 32, 33, 35, 36, 38, 39-41, 43-48, 50, 51, 62, 64, 66, 68, 70, 72, 74-
76, 79, and 84-89 are rejected for similar reasons as stated above. Furthermore Primark discloses
the servers include multiple servers organized as a distributed system (i.e. server clusters)
(Figure 1). Primak discloses the DNS interrogating the candidate servers to measure server
capacity information (i.e. server congestion) (p. 2, ¶ 23).

**Claims 14, 31, and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Primak in view of U.S. Patent No. 6,006,218 by Breese et al. in further view of U.S.
Patent No. 6,578,066 by Logan**
Referring to claim 14, Primak- Breese discloses the invention substantively as described in claim
1.

Primak- Breese does not disclose the weights sum to one.

However, Logan shows percentages that are summed to a hundred percent, equaling a
whole value of one (Table V, col. 9: "traffic dist" used as percentages) in order to provide
flexible load balancing based on metrics (Logan: col. 2, lines 66-col. 3, line 5).

It would be obvious to a person of ordinary skill in the art at the time the invention to
create the invention of Primak to include load balancing of Logan in order to provide flexible
load balancing based on metrics (Logan: col. 2, lines 66-col. 3, line 5).

Claims 31, 77 are rejected for the same reason as given above.

**Claims 17, 34, and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Primak in view of U.S. Patent No. 6,006,218 by Breese et al. in further view of Meek et
al. (USPN 6,539,426) (hereinafter Meek).**

Referring to claim 17, Primak- Breese discloses the invention substantively as described in claim 1.

Primak- Breese does not disclose the client interrogates the candidate servers in the list to measure network performance.

Meek discloses another load balancing method wherein client interrogates the candidate servers in the list to measure network performance (col. 10, lines 6-27).

It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Meek with Primak- Breese to adequately provide business applications programs that are distributed amongst the servers in the network providing redundancy and increased application usage as supported by Meek (col. 1, lines 45-50).

Claims 34 and 80 are rejected for similar reasons as stated above.

Claims 8, 25, 37, 42, 49, 73, and 81-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Primak in view of U.S. Patent No. 6,006,218 by Breese et al. in further view of Guenthner et al. (USPN 6,134,588) (hereinafter Guenthner).

Referring to claim 8, Primak in view of Breese discloses the invention substantively as described in claim 1.

Primak in view of Breese does not disclose extra servers are selected randomly.

In analogous art, Guenthner discloses selecting extra servers randomly (e.g. abstract; Figure 8; col. 8, lines 25-50).

It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Guenthner with Primak-Breese to provide a client-side solution to ensure availability of Web services to a Web browser as supported by Guenthner (col. 1, lines 65-67).

Claims 25, 37, 42, 49, 73, and 81 are rejected for similar reasons as stated above.

   **Claims 61, 63, 65, 67, 69, and 71 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Primak in view of U.S. Patent No. 6,078,960 by Ballard in further view
of Lin (USPN 6,298,451).**

Referring to claim 61, Primak- Breese discloses the invention substantively as described in claim
1.

   Primak- Breese does not specifically disclose the client is the node adapted to interrogate
individual servers.

   In analogous art, Lin discloses another system for optimizing server selection which
discloses a client interrogating servers from a candidate server list (col. 5, lines 7-19; col. 6, lines
15-39).

   It would have been obvious to one of ordinary skill in the art to combine the teaching of
Lin with Primak- Breese in order to reduce the load off of the DNS server of Primak- Breese in
order to allow the client, which is less loaded than a DNS server, the task of determining if a
candidate server is available, thereby reducing overhead transactions on the DNS server, thereby
allowing more efficient processing of incoming DNS requests.

Claims 63, 65, 67, 69, and 71 are rejected for similar reasons as stated above.

                              Allowable Subject Matter

   Claims 9-10, 26-27 and 82-83 are objected to as being dependent upon a rejected base
claim, but would be allowable if rewritten in independent form including all of the limitations of
the base claim and any intervening claims.

                                   Conclusion

   Applicant has failed to seasonably challenge the Examiner's assertions of well known
subject matter in the previous Office action(s) pursuant to the requirements set forth under MPEP

§2144.03. A "seasonable challenge" is an explicit demand for evidence set forth by Applicant in

the next response. Accordingly, the claim limitations the Examiner considered as "well known"

in the first Office action, are now established as admitted prior art of record for the course of the

prosecution. See In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943).

        Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

        Any inquiry concerning this communication or earlier communications from the

examiner should be directed to BENJAMIN R. BRUCKART whose telephone number is

(571)272-3982. The examiner can normally be reached on 9:00-5:30PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin R Bruckart
Primary Examiner
Art Unit 2446

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